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Non-Profit Law and Consulting in Conservation of Natural Resources and the Global Environment

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COMMENTS OF THE NATURAL HERITAGE INSTITUTE

SEPTEMBER 1, 1994

SWRCB WORKSHOP ON BAY-DELTA STANDARDS

Response to the California Urban Water Agencies' Recommendations to the SWRCB for a Coordinated Estuarine Protection Program

NHI appreciates the willingness of the SWRCB to hold another workshop to take additional testimony on the Bay-Delta standards. We have already provided extensive comments to the SWRCB at previous workshops. Today, we will confine ourselves to a few comments on the CUWA document, entitled "Recommendations to the SWRCB for a Coordinated Estuarine Protection Program for the San Francisco Bay-Sacramento and San Joaquin River Delta Estuary", dated August 25, 1994. We will give the greatest amount of attention to the elements which are most pressing to the SWRCB -- the proposed Bay-Delta standards -- and will also have a few words to say about implementation strategies. We defer to other environmental organizations with respect to other elements of the CUWA Recommendations.

Over the past several months, the urban and environmental communities have worked diligently to narrow our differences over the appropriate form of Bay-Delta standards and how those standards should be implemented. We have made a great deal of progress. In particular, we have achieved substantial-- albeit not total--agreement on the details of an estuarine habitat standard, and have agreed, in principle, on how to set and implement a salmon smolt survival standard. In general we are very pleased and impressed with the CUWA Recommendations. The urban agencies have acted in good faith to provide scientifically based, proactive recommendations designed to help solve the problems in the Estuary. This is a major step forward and deserves a great deal of credit. We do not agree with everything in the document, of course, but the differences are now increasingly over how best to achieve the same goal -- estuarine protection.

We believe that this convergence between these traditionally adverse parties provides a firm basis on which to erect standards. We particularly note the CUWA endorsement of the efficacy and need for a Roe Island standard in this regard. While acknowledging CUWA's constructive contribution to the design of standards, it is equally important to the development of adequate and acceptable standards to point out the deficiencies in their recommendation. That is the burden of this part of the NHI statement.

1. The Estuarine Habitat Standards (X2)

In general, NHI agrees with the proposal for the Estuarine Habitat Standard as set forth by CUWA. Indeed, we worked with CUWA to develop the methodology upon which the sliding scale is based. However, we have concerns in the following areas:

Level of Protection

CUWA proposes that the estuarine standard should seek to replicate salinity conditions at the three control points based upon 1968 to 1975 conditions. Under the state's anti-degradation policy, NHI believes that the SWRCB cannot seek to replicate conditions based upon any time later than the 1968 level of development and that the SWRCB may need to replicate conditions from an even earlier date in order to protect the resource. This constraint was analyzed at length in NHI's comments to EPA on their proposed standards, which have been provided to the State Board as an attachment to our earlier statements.

For this reason, NHI cannot support the numbers of days specified in CUWA Appendix 1, Tables 1, 2, and 3. The values on these tables (we understand) were generated using the sliding scale equation with a target date of 1971.5. To comport with the legal requirements of the anti-degradation standard, the SWRCB must recompute these tables using a target of date of 1968 or earlier.

Roe Island Trigger

CUWA proposes that the Roe Island standard not be invoked unless Roe Island salinities for the last two weeks of the previous month average 2 ppt or less. We remain unconvinced that a trigger is warranted, and continue to oppose that approach.

Even if such a trigger were warranted, however, we question whether this particular form of trigger will adequately protect the Estuary. The estuarine standard is based upon unimpaired flow and cannot be manipulated by the projects. By contrast the Roe Island trigger, as currently proposed, can be manipulated. For example, if salinity at Roe Island were in the region of 2 ppt during the second half of any month, then the state and federal projects could potentially reduce releases (holding water in storage), force the salinity barrier upstream, and thereby assure that the Roe Island standard is not triggered. This will become an even greater risk if local projects begin to contribute to meeting the standard and have a stake in seeing that the Roe Island standard is not invoked.

Thus, if a triggering mechanism is employed, then the SWRCB should develop a mechanism that is based upon some measure of unimpaired flow, not actual flow out of the Delta.

2. Striped Bass Standard

CUWA suggests that an "additional protection criteria for striped bass spawning is not necessary and could have significant adverse impacts on various native aquatic species". The evidence is equivocal as to whether this concern is warranted. Quite apart from the unresolved question whether protecting striped bass in the lower San Joaquin River is likely to damage other species, an important regulatory principle at stake here. Discharges of agricultural drainage in the lower San Joaquin clearly impair water quality in that reach and in the estuary. To prevent impairment, we believe that the standard should be set at the levels suggested by EPA. However, the standard should be met, through control of saline discharges to the River, not through dilution flows.

3. Salmon smolt survival

CUWA proposes that a standard should be established for salmon smolt survival consisting of a set of implementation measures or management requirements (which might be calibrated to meet specified survival goals). However, the regulatory obligation would be to meet the management prescription, not the survival goal.

NHI could support this general formulation under the following conditions:

- o The management prescriptions should be calibrated to attain a pre-project level of abundance of anadromous fish and in any event must be sufficient to attain the doubling goals of the Central Valley Project Improvement Act.
- o The goal and the management measures should encompass the needs of all salmon runs. In particular, the spring run salmon should be protected by any standards promulgated by the SWRCB. NHI presented a proposal for a spring run-specific protection standard in the July workshop.
- o The SWRCB must make clear that consistent failure to meet the abundance goal will trigger the development of performance standards at the next triennial review.

In addition to these conditions, the SWRCB may wish to encourage the cooperative development of a draft list of implementation measures/ management requirements by the water user and environmental communities (as suggested in the CUWA Recommendations). However, the SWRCB must itself promulgate a comprehensive set of measures if prompt agreement on a program is reached by these groups.

Preliminary Suggestions on an Implementation Strategy

An appreciable quantity of water now being exported out of the estuary or diverted from its tributaries will have to be relinquished back to this system to comply with Clean Water Act/Endangered Species Act requirements (the Club Fed standards to be finalized on December 15) or equivalent state requirements (whether expressed in terms of salinity or flows). These water needs will overlap to a considerable extent with those needed to achieve the anadromous fish doubling goals of the CVPIA.¹

There are two basic ways to reallocate the necessary water from existing rightsholders:

- (1) Apportion reductions in water diversions, based on formulas developed by the regulatory agencies and driven by various water rights considerations. This is the approach assumed by the CVPIA PEIS, for example.
- (2) Purchase the necessary water from willing sellers on a least-cost basis, that is, from those who currently derive the least economic value from the use of their water.

Advantages of a compliance water purchase alternative:

1. To the state economy: a "least-cost" approach reduces first order economic costs (in the form of lost agricultural productivity) to a mere \$4 million in an average year, and to \$43 million even in periods of sustained drought. The water needed for environmental improvement would come from the least economically profitable uses of water in agriculture.² Also, water purchases are likely to be much more flexible in generating water

¹ This environmental water can come from anywhere in the Sacramento/San Joaquin/delta water system, provided that at least 20% is provided from the San Joaquin to meet the San Joaquin smolt survival and striped bass spawning standards. Under an optimal strategy, the water would be generated in a manner that would do "double duty" by also enhancing tributary streamflows as required by the anadromous fish restoration (doubling) plan under the CVPIA, and the minimum stream flow evaluation program of DFG.

² The ability of a purchase fund to extract water from agriculture at minimum cost results from 1) the existence of pockets of low-productivity water in California agriculture, 2) the power of market mechanisms to identify and mobilize low-value water for other uses, and 3) the fact that a purchase fund can reach more growers than conventional water trading (i.e. riparian users in the Delta). The second option has two advantages: First, NHI's economic analysis shows that meeting the Club Fed requirements through voluntary transfers of purchased water is much more economically efficient, in that the same environmental benefits are accomplished with much smaller economic costs. As the attached memo to Walt Pettit summarizes, the water purchase option imposes less than 1/10 the cost of the regulatory reallocation approach in average water years, and about 1/4 the cost in critically dry years, assuming in both cases that half of the bay-delta compliance water would come from the

in a manner that will achieve the CVPIA restoration goals and the delta inflow requirements simultaneously. This will also lower the effective cost of compliance.

2. To the water users: No water user would be forced to give up water for environmental restoration. All reallocations would be voluntary and compensated. Water users who do not want to relinquish water to meet standards would pay a user fee which would comprise a small percentage increase of their current water costs.

3. For the environment: A least-cost compliance method represents a path of least resistance to getting suitably protective environmental requirements in place. That should expedite the standard setting process, lend a degree of stability to the resulting regime, and, most important, encourage suitably protective standards by the regulatory agencies by eliminating the fear of economic dislocations. An economically efficient implementation program can probably do more to protect the interests of the water users than further refinement of the content of the regulatory standard.

4. Groundwater resources: The purchase fund would keep constant, or even improve, groundwater levels because, under the approach envisioned, growers selling their water to meet environmental requirements would be required to commit to not substitute groundwater. There is no such assurance where water users relinquish water to comply with environmental standards under an apportioned reduction approach.

Barriers to an environmental water transfer program:

In draft D-1630, the State Water Board proposed a water mitigation fund to serve two purposes: to finance technical fixes like those authorized in the CVPIA, and to purchase water for fishery improvements in the estuary in addition to those that would have been accomplished through apportioned reductions in diversions and exports from the estuary. The water mitigation fund would be generated through fees assessed on water users that divert or store water tributary to the delta. NHI and other environmental organizations favor this approach, and have petitioned the State Board to resurrect this feature of D-1630.

However, our legal research discloses that there is a serious impediment to this approach: while it is legally permissible for the Board to assess water users for such a mitigation fund, the Board would not be authorized to expend the fund for the intended purpose (to purchase compliance water) without a specific legislative enactment.³

CVPIA requirements and that water transfers across the delta would be tightly constrained.

³ The basic problem is that absent a specific law to the contrary, money raised by an agency must go into the General Fund. The rule resides in California Government Code § 16301:

Except as otherwise provided by law, all money belonging to the State received from

Solutions:

The best approach would be legislation specifically authorizing the State Board to create and expend a mitigation fund analogous to the CVPIA restoration fund and similar to the one proposed by the State Board in draft D-1630. The legislation need not specify the water use assessment formula; that could be left to the State Board to develop in a water rights proceeding. However, there is no assurance that the legislature will enact such a special authorization. Thus, an approach for creating a compliance water purchase fund under existing law is described below:

The State Board intends to convene a water rights proceeding in 1995 to implement the delta standards (either the Club Fed version which is to be finalized in December, or equivalent substitute state standards that are to be finalized in 1995). In that proceeding, in compliance with the instructions from the Racanelli decision, it will have to apportion the responsibility for meeting Bay-Delta standards among the water rights holders that divert or store water tributary to the Bay-Delta system. Water rights holders would be able to meet their share of the compliance obligations by either relinquishing water directly, or by paying another water user to do so, that is, by entering into water transfer arrangements. This can be done under existing law.⁴

There are two problems with an such an uncoordinated approach, however. First, if water users begin competing with one another for the purchase of compliance water, the cost may increase substantially. Second, decentralized purchases will be difficult to coordinate with the CVPIA restoration fund, and the synergistic benefits may be lost. Thus, creation of a centralized compliance water purchase mechanism through agreements among the water users may be desirable.

It would also be possible to set up such a centralized purchase mechanism as part of the State Board implementation plan. For example, the State Board might permit a

any source whatever by any state agency shall be accounted for to the Controller at the close of each month. . . and on the order of the Controller be paid into the Treasury and credited to the General fund, provided that amounts received as partial or full reimbursement for services furnished shall be credited to the applicable appropriation.

This section is fairly self-explanatory. In a nutshell, it means that "all State money received from any source whatever must be deposited to the General Fund unless otherwise provided by law." This distillation was offered in a 1947 case in which the facts were nearly identical to ours, where the question was "whether the receipts from the sale of State forest lands [were] to be deposited in a special fund which may be used for the purchase of additional forest lands." The opinion was careful to distinguish between receipts authorized under a particular article, which could be deposited in a special fund, and receipts not so authorized, which had to go to the General Fund.

⁴ Although AB 1222 has been enacted this legislative session to assure that the water actually reaches the delta and is not absorbed along the way. It is essential that the governor sign this bill.

water user to comply with its apportioned obligation to meet the delta requirements by providing either water or a payment of money in lieu thereof. However, certain design features would appear to be essential:

- o These funds could not be paid to the State Board, or to any other governmental entity, because they would then be lost to the general fund. Instead, a non-governmental, non-profit entity would be established to serve as trustee of these funds. We might refer to this entity as the "Environmental Water Trust" (EWT) for lack of a better term.
- o The EWT would use the funds to purchase water from willing sellers according to water demand instructions from the State Water Board. That is, the State Board would decide where, when and how much water was needed to satisfy standards in light of the waivers or exceptions that had been issued. The EWT would then enter into \$1707 water transfers from willing sellers to meet that need from the cheapest sources available.
- o Sellers would be required to agree not to substitute groundwater, either directly or indirectly, for the transferred water, and to submit a water budget and allow monitoring of their water use.
- o The in lieu payments and the water transfers could be either single or multi-year. In response to multi-year waivers, the EWT would probably purchase a base supply of water. For variable water needs, it might enter into option arrangements. The EWT operating costs would be built into the in lieu assessments.
- o The in lieu payments would not constitute a waiver of the water user's regulatory liability. The program would probably not be approvable by EPA if the risk of failure of the compliance water purchase mechanism were shifted to the environmental resources. And, it would not be equitable to require the water users who opt to relinquish water to absorb this risk. They are already meeting the obligations that the law imposes on them. Thus, the water users that opt to pay the in lieu fee must remain ultimately responsible for achieving compliance with their share of the regulatory obligations. This risk allocation mirrors the CVPIA, which also assesses water users, but does not guarantee the results of the mitigation measures purchased with those funds. There are two design implications of this:
 1. Under these circumstances, the water rights holders that opt for the in lieu payment alternative should be represented on the governing board of the entity that uses the funds to purchase compliance water. The Board of the EWT might be comprised of representatives of the state and federal water agencies, both regulatory and managerial, representatives of the major water user interests of the central valley, and environmental organizations. Clearly, this EWT should function under a coordinated operations agreement with

the restoration fund that has been established under the CVPIA.

2. **The in lieu water use charges should be set initially at a rate high enough to assure that enough water can be purchased to meet the inflow/salinity requirements under any conceivable market conditions. Stated another way, the in lieu payments should include an insurance premium. At the end of each water year, the excess revenues (above amounts actually needed to purchase compliance water) would be refunded to the in lieu water users on a pro-rata basis, or carried forward as a credit against future year assessments, at the election of the water user.**

These concepts are still under discussion with CUWA and other environmental organizations. We present them to the State Board at this juncture to invite the staff into this dialogue and to elicit constructive reactions.



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Gregory A. Thomas
President

May 25, 1994

Mr. Walt Pettit
Executive Director
State Water Resources Control Board
901 P Street
Sacramento CA 95814

Dear Mr. Pettit:

As you may know, NHI supports the creation of an Environmental Water Fund to purchase and develop all or part of the water which may be needed to meet new environmental standards in the Delta. We believe that the use of such a fund will permit significant improvements in environmental protection with a minimum of economic dislocation to California's water users.

As part of NHI's response to the proposed EPA Bay-Delta standards, NHI commissioned a study by UC Berkeley economist, David Sunding, to examine the costs of meeting proposed federal EPA and ESA requirements through a water purchase fund compared to a reallocation from users. A revised version of Dr. Sunding's study is attached.

The results were striking. Dr. Sunding found that under any reasonable scenario, the net costs¹ of using the water fund to meet EPA and ESA standards were less than even the most optimistic scenario involving the reallocation of water from water exporters. These results are summarized below:

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1. Net costs represent losses of economic production. The actual cost of purchasing compliance water is a transfer payment and does not represent a net loss for California as a whole.

Mr. Walt Pettit
May 25, 1994

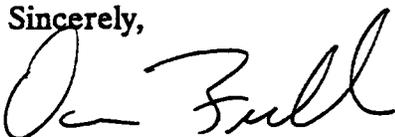
Page 2

Compliance Mechanism	Normal year Net Cost (\$M)	Critical Year Net Cost (\$M)
Water Fund: north-to-south transfers constrained	3.7	42.9
Water fund: unconstrained market transfer	6.6	66.4
Reallocation from CVP/ SWP contractors: north-to-south market transfers constrained	64.9	248.7
Reallocation from CVP/ SWP contractors: unconstrained market transfer	19.8	117.2

Moreover, if the cost of water on the market is assumed to be close to the price of water during the Drought Water Bank, then the amount of funding required for the water purchase fund would total only \$27 million and \$137.5 million per year in normal and critical years respectively. This is very little money for a lot of benefits.

Although Dr. Sunding's work was in response to the federal standards, we believe that it should be useful to the SWRCB as well. In particular, the study makes clear that the economic impacts resulting from the SWRCB's Bay-Delta standards will depend, to a large, degree on whether they are implemented through a water purchase fund or through reallocation.

Sincerely,



David Fullerton

cc: SWRCB members
Tom Howard
Jerry Johns